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ABSTRACT

In this report issues surrounding the continued growth and development of community colleges in the United States are presented and discussed. The early developmental history of community colleges is described along with the established enrollment trend-lines over time. These factors are then used to postulate a large future enrollment. The next section deals with recommended policies for community college development during 1970-80. Areas to be emphasized are: (1) improved access to higher education, (2) technical-vocational education, (3) articulation among 2- and 4-year colleges, (4) guidance as a central function, (5) remedial education, (6) community service, (7) federal support programs, (8) state master plans, and (9) governance policies. Projections of community college growth during 1970-80 including enrollments, new schools, and required faculty and staff needs are made. (AL)

A COLLEGE FOR EVERYMAN

Dale Tillery

Spring 1970

Community colleges have become full partners with other institutions of higher education in the educational pacesetter states of the nation. Development of such partnerships in all states would contribute to the achievement of several important goals of the United States in the decade ahead. The public two-year colleges are achieving this new importance not only because they are successfully educating an increasing proportion of all undergraduate students, but because, among colleges, their student bodies are by far the most representative of American society. These colleges serve more students of color, more of the poor, and more adults than other colleges and universities in this or any other nation. At the same time, they prepare a high proportion of very successful high school students who then transfer to senior institutions, along with other less successful peers who needed a second chance. This representativeness is demonstrated best by the remarkable similarities between the socioeconomic characteristics of community college student bodies and those of the communities they serve. This new partnership in education envisions the community college

as a bridge between secondary education and work for some students, and advanced education for others. Through broad access to its comprehensive functions the community college will contribute much to the achievement of the following national goals in the years ahead.

NATIONAL GOALS	COMMUNITY COLLEGE CONTRIBUTIONS
• EQUALITY OF OPPORTUNITY THROUGH EDUCATION	Open door to diverse programs at low cost for youths and adults
• NATIONAL ECONOMIC GROWTH AND WELL-BEING RESULTING FROM ADEQUATELY TRAINED MANPOWER	Well-planned and taught programs to provide for technical, managerial, and professional skills at several levels.
• EXPANDED OPPORTUNITIES FOR FULL INDIVIDUAL DEVELOPMENT	Opportunities for guided exploration of educational and career alternatives, and for relevant education
• INCREASED EDUCATIONAL OPTIONS WITHIN COORDINATE SYSTEMS OF HIGHER EDUCATION	Comprehensive programs, including preparation for students unprepared, unwilling, or financially unable to enter senior colleges at first matriculation
• PROFESSIONAL OPPORTUNITIES FOR AMERICANS OF MINORITY BACKGROUND	Increasing opportunities as teachers, counselors, and administrators for Americans of diverse racial and ethnic backgrounds
• ENHANCED QUALITY OF LIFE IN AN INCREASINGLY AFFLUENT SOCIETY	Community centers for cultural, intellectual, and personal renewal

HERITAGE, GROWTH, AND FUTURE OF THE COMMUNITY COLLEGE

The community college is an emerging institution with multiple historical roots. Since its own identity has been closely tied to the changing functions of other educational institutions, particularly the public schools and the land-grant universities, its educational philosophy is both eclectic and frequently misunderstood. But from this heritage a compelling orthodoxy of institutional goals has developed. There is a certain common sense to the beliefs about people which undergirds these goals. Perhaps this is why the community college has captured the imagination of the nation, and why communities from coast-to-coast are giving their support and dollars to the development of these new colleges. To be sure, segments of the academic community remain skeptical because traditional values and standards of higher education are, indeed, being challenged. Among the challenges are beliefs that all men are educable; that educational opportunities should be relevant to a wider range of human talents and abilities than those traditionally valued in higher education; that students with unsuccessful educational histories do achieve when given renewed opportunities to find themselves and to try new options; and finally that the local two-year colleges should build their programs to serve the educational and career needs of their communities.

Heritage of the Community College

The historic roots of the community college help to explain its special contributions to the diversity of opportunity in contemporary higher education, as well as institutional differences in commitments and in readiness to make such contributions.

Early American Colleges:

The founders of our nation and those who later came from other cultures brought their colleges with them. This early tradition of small denominational colleges responsible to local committees or boards is frequently neglected in tracing the influences on contemporary community colleges. However limited, these early colleges did seek to prepare men for the occupations which many deemed most necessary for the new American society--the clergy, and later law and teaching. They were also fundamentally concerned with education for values. These two threads, career and general education, can be followed through all subsequent higher education and clearly tie the local public two-year colleges to these early institutions.

The Land-Grant Movement

The Morrill Act of 1862 and the early land-grant universities had profound effects on American higher education generally, but nowhere is this more evident than in the philosophy and

goals of the contemporary community college. The land-grant movement brought a new kind of education to the people. It revolutionized the curriculum of higher education by its emphasis on technology, agriculture, and applied science. It challenged standards by its mission of service and outreach to the farm, the factory, and to adults hungry for education. The very success of these universities during the past century has transformed their roles and functions. Many of them have become national and international centers for research, and for graduate and professional study. This transformation has closely paralleled the emergence of comprehensive community colleges which, in turn, are reshaping and extending the service philosophy of the land-grant movement.

Bifurcation of the American University:

A closely related influence on two-year college development was the advocacy of the bifucated university at the turn of the century. William Rainey Harper at the University of Chicago was joined by other university presidents across the nation in supporting the creation of a lower-division institution. Their dual goals were to free the universities to pursue their primary functions of advancing knowledge and providing graduate education, while at the same time increasing opportunities for education beyond high school. The plan

envisioned the movement of the most able "junior college" students to the universities. The term junior college is, in fact, attributed to President Harper. California became an early testing ground for the bifurcated university. Under Presidents Sproul and Kerr, the University of California gained international eminence while its partnership with local junior colleges led to unparalleled access to higher education in that state. Similar developments in other states have kept the academic preparation and transfer of students as the central function of junior colleges. Evaluations of this movement of students from two to four-year institutions--by the senior institutions themselves, as well as by independent agencies--show how successful are these partnerships.

Democratization of Education:

The transformation of junior colleges into community colleges, with comprehensive programs of both transfer and occupation education, is essentially a phenomenon of the past two decades. But there were influences from the beginning which promised expanding programs of education at the local colleges. The first state enabling legislation for public two-year colleges permitted occupational courses and a few such courses were, in fact, offered by the first public junior college in that state. As extensions of secondary education,

the new colleges were greatly influenced by the comprehensive high schools--which were, themselves, twentieth century manifestations of both the Populist Movement in America and the demands for new skills and increased education resulting from rapid industrialization and urbanization.

Many high schools after World War II transferred much of their occupational education to the junior colleges, most of which were part of the same secondary school districts. This transition has not been retarded by the recent severance of grades thirteen and fourteen from secondary school districts and the formation of independent junior college districts or of state-sponsored systems of junior colleges. Nevertheless, the diversity of traditions and practices is great and some states have retained large components of occupational education in the high schools, and others have developed special technical-vocational schools rather than comprehensive community colleges.

The pace of democratization was greatly increased as a result of the nation's commitments to universal secondary education and to equality of opportunity. In recent years, massive federal assistance for the higher education of returning service personnel, for vocational education, for college construction, and for general financial aid to students has greatly increased the demands for education beyond high school. These

new demands have changed the nature of programs across emerging systems of higher education. Few influences, however, have been more important than the pressures for equal educational opportunity for the poor and for citizens of minority backgrounds. There is no single institution which is prepared by tradition, commitment, or resources to answer all of these new demands for higher education. Nevertheless, there is wide conviction that community colleges must play a central role if the vast talents and skills of the American people are to be fully developed at acceptable costs and without damage to the universities' essential role in the advancement of knowledge and advanced study.

Such partnership among institutions has become the central issue in state planning for higher education. It is not surprising that there has been a direct relationship between state master planning for postsecondary education and the pace and quality of community college development.

The Growth of Junior Colleges

At the turn of the century, there were only a few score of junior college students, whereas today their numbers exceed two million. Approximately 95 percent of these students are in public institutions and, with their peers in private two-year colleges, they constitute over 25 percent of all undergraduates in the United States. Chart 1 shows the explosion

of junior college enrollments during the past decade; yet, in spite of this rapid growth, the prospects are for equivalent growth in the next ten years.

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Chart 1 about here

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At present there are over 1,000 two-year colleges in the United States, and in recent years new colleges have been created at the rate of one each week. As will be shown in a later section of this report, something like the same rate of institutional development will be needed between now and 1980. It is almost as difficult to report the precise numbers of two-year colleges today as it is to predict those for the future. Different estimates exist because of rapid change in the number of colleges and differences in definitions. Folger gives the following estimates for 1968 in Table 1.

TABLE 1

Number of Two-Year Institutions

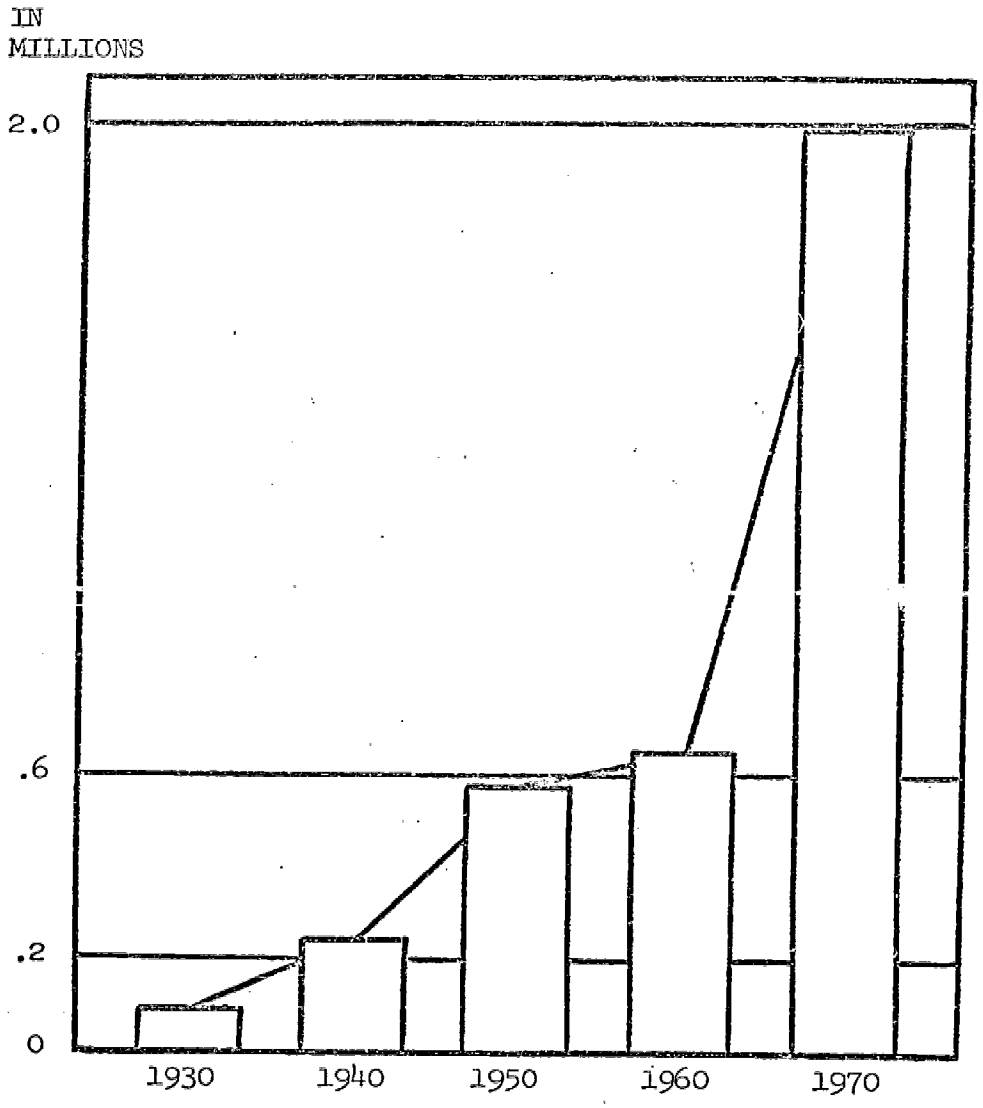
Fall, 1968

Private Junior Colleges	254-267
Public Separate Community Coll.	570-590
Branches of Universities	105-111
Other 2-Yr. Specialized Insts.	100-110
TOTAL	1029-1078

Source: John K. Folger's working paper for the Carnegie Commission on Higher Education, January 5, 1970.

CHART 1

ENROLLMENT IN TWO-YEAR COLLEGES,
UNITED STATES, 1930-1970



Source: Adapted from American Council on Education data, with estimated 1970 enrollments.

While the number of private two-year colleges has decreased in recent years, the number of public community colleges has not only doubled but their average size has increased about 6 percent each year. This ten-year growth in enrollments, colleges, and average size is displayed in Table 2.

TABLE 2

Public Community Colleges 1958-1968

Year	Total Enrollment in Thousands	Number of Colleges	Average Size
1958	443	297	1490
1960	526	320	1640
1962	668	366	1825
1964	874	407	2140
1966	1190	479	2480
1968	1646	664	2480

Source: Adapted from John K. Folger's working paper for Carnegie Commission on Higher Education, January 5, 1970.

The development of community colleges in the United States has been very uneven and has largely been dominated by a few states. Seven pacesetter states (California, New York, Illinois, Michigan, Florida, Texas, and Washington) accounted for more than two-thirds of all enrollments in 1968 and over one-third of all public community colleges. These, of course, have been the high growth states in recent years, although their pace of development from 1960-1968 varied greatly. For example,

as shown in Chart 2, Florida's community college enrollments increased almost 500 percent while California, with the least dramatic proportional development, more than doubled the number of students in its two-year colleges.

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Chart 2 about here

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In addition to the seven pacesetter states, there are about twice that number where substantial development of community colleges has taken place. These include Arizona, Georgia, Iowa, Kansas, Maryland, Massachusetts, Mississippi, Missouri, North Carolina, Ohio, Oregon, Pennsylvania, Virginia, and Wyoming. There is another group of about sixteen states where a start has been made in community college development and another dozen in which little has been done toward development of public two-year comprehensive colleges. Another way of showing differences in community college development to date is to use ratios of junior college enrollments to all undergraduate enrollments. Table 3 shows four clusters of states with very high to low ratios based on total enrollments. Similar groupings result if degree-credit enrollments only are used to establish ratios.

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Table 3 and 4 about here

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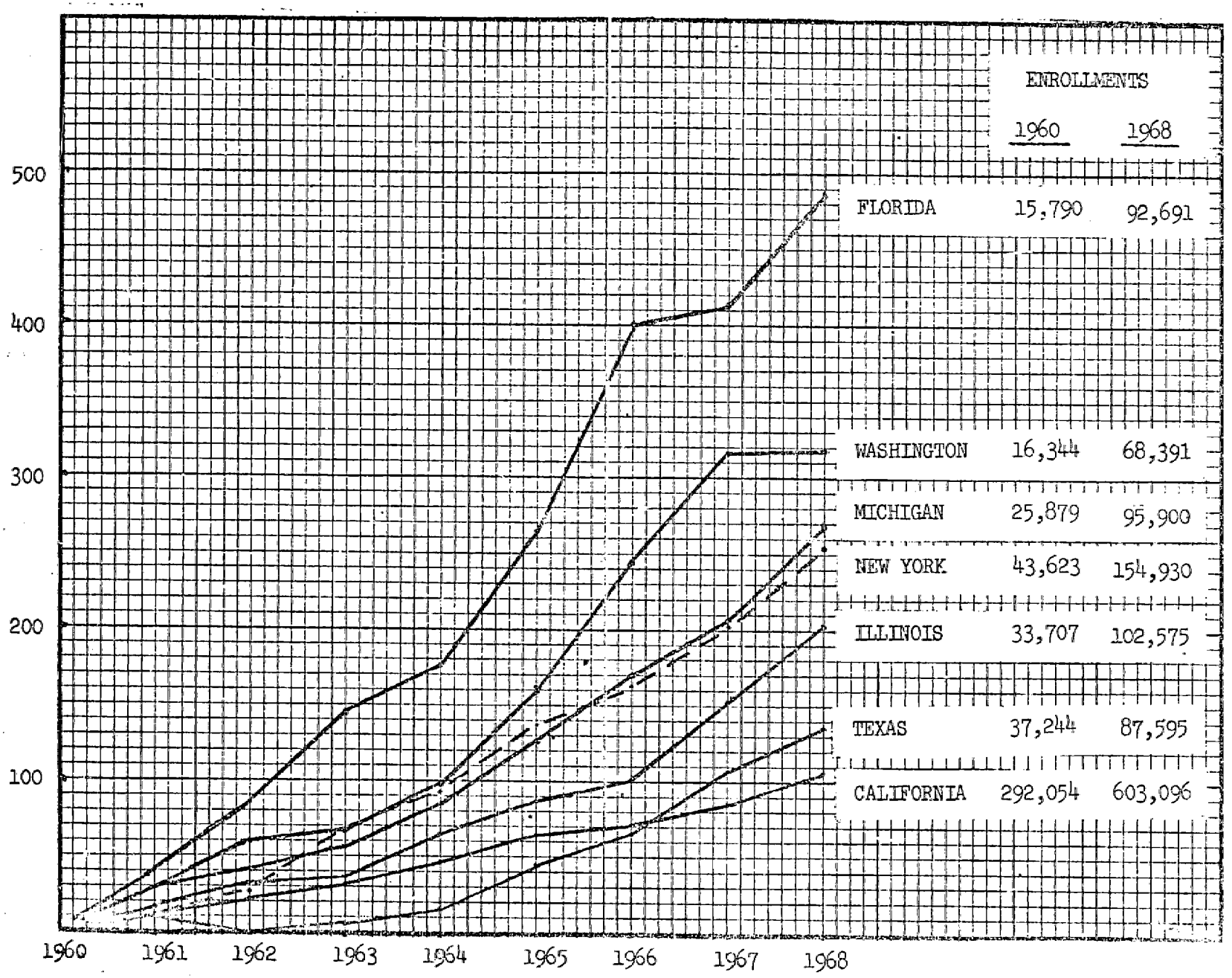
CHART 2

RELATIVE GROWTH OF COMMUNITY COLLEGE ENROLLMENTS 1960-1968 FOR SEVEN PACESETTER STATES



Source: Medsker, L. L. and Tillery, D. Breaking the Access Barriers: A Profile of Two-Year Colleges. New York: McGraw-Hill, 1971. Sponsored by the Carnegie Commission.

TABLE 3

ENROLLMENT IN TWO-YEAR INSTITUTIONS OF HIGHER EDUCATION AS A PERCENTAGE OF TOTAL UNDERGRADUATE ENROLLMENT, BY STATE, 1968

State	Percent	State	Percent
Very high (30 percent or more)		Moderate (10 to 20 percent)	
California	61.2	North Dakota	19.9
Florida	52.0	Massachusetts	18.4
Washington	48.6	Pennsylvania	17.8
Arizona	41.3	Wisconsin	17.7
Wyoming	39.4	New Jersey	17.2
Illinois	35.0	Kansas	17.1
Mississippi	34.7	Rhode Island	16.7
Michigan	34.2	Colorado	15.0
New York	30.5	Ohio	14.6
Oregon	30.4	Kentucky	14.3
High (20 to 30 percent)		Minnesota	12.2
Hawaii	29.2	Oklahoma	11.7
Texas	28.7	Vermont	11.2
North Carolina	28.1	Low (less than 10 percent)	
Delaware	27.8	Alaska	9.7
Maryland	25.5	District of Columbia	9.0
Idaho	25.2	New Mexico	9.0
South Carolina	25.1	Tennessee	8.3
Connecticut	23.9	Arkansas	7.9
Alabama	22.8	Utah	7.9
Iowa	20.7	West Virginia	7.8
Georgia	20.6	Nebraska	6.7
Virginia	20.4	Louisiana	6.6
Missouri	20.2	Indiana	5.1
		Montana	5.0
		New Hampshire	4.9
		Maine	1.6
		South Dakota	1.3
		Nevada	0.0

Source: U.S. Office of Education data, adjusted by Carnegie Commission staff.

TABLE 4

COMMUNITY COLLEGES: PACESETTER STATES

State	Number of Public Community Colleges 1960	1967	Total Enrollments 1967	Average Size of Enrollments Each College	Total 18-24 Year Old Population in State--1967	Percent 18-24 Year Old Population Served
California	67	87	540,920	6,000	2,179,000	25
Florida	25	27	81,259	3,010	652,000	13
Illinois	22	41	84,911	1,060	1,060,000	9
Michigan	16	28	79,817	2,850	870,000	9
New York	25	39	132,671	3,400	1,811,000	8
Texas	34	42	77,276	1,840	1,334,000	6
Washington	12	22	68,003	3,100	350,000	19

Source: Medsker, L.L. and Tillery, D. Breaking the Access Barriers: A Profile of Two-Year Colleges. New York: McGraw-Hill, 1971. Sponsored by the Carnegie Commission.

How are the differences among the states to be explained? The diversity in community college development reflects differences in state master planning, adequacy of financial arrangement, strength of commitments to comprehensive rather than limited programs, and the degree of competition from either four-year institutions or vocational schools. In addition, rapidly growing states are more likely to develop community colleges than are small, slow-growing or sparsely populated states. These several factors will continue to differentiate states' rates of development in the future.

The Future of the Community College

In the decade ahead it is likely that all states will provide for community college type education, and all but a few will do so in state systems of comprehensive community colleges. Nevertheless, only about half of the states now have plans for developing community colleges within commuting distance of most of the population, and eight states have no provisions for financial support for these public colleges.

In addition to inadequate financial arrangements and state planning, there are two impediments which may slow community college development. Both involve competition from other institutions--competition from four-year institutions on the one hand, and from vocational systems on the other. In at least a dozen states, four-year institutions are reasonably well

distributed, they are relatively non-selective, and they offer some occupational programs. Continued competition for funds and students is likely to inhibit community college development. Although only a few states have competing vocational systems which operate college-level programs, there is wide-spread competition for federal funds. Even though such federal support for vocational education is dispensed through state plans, intense rivalry may impede future development of occupational programs in community colleges in a number of states.

Folger believes that the combination of inadequate planning, insufficient resources, non-comprehensive programs, and competition from other institutions will limit the development of community colleges in 20 to 25 states during the next decade, unless positive incentives are provided by the federal government to help overcome these problems.

Estimated Growth to 1980

In spite of these limitations, the pace of community college development to 1980 will closely parallel that of the past decade in reference to enrollment growth and the development of new institutions. The most modest projection of enrollments to 1980 assumes no change in the proportion of undergraduate enrollments in two-year colleges in 1968. With such unlikely restriction in community college development, there

would still be about three million students in those colleges in 1980. This is an increase of nearly 1.2 million students, and would require about 250-300 new public campuses and 50,000 additional teachers. On the other hand, if 60 percent of future undergraduates were to enter two-year colleges, there would be about 4.4 million students by 1980. This would be an increase of approximately 2.5 million students, requiring over 280 new campuses and over 100,000 new teachers. The assumptions for these projections and their use in estimating community college development in each state, are presented in the closing section of this paper. For the nation as a whole, however, it seems likely that the proportional shift from four-year to two-year undergraduate enrollments will continue at a steady rate of about one percent each year. For degree-credit students, this ratio will shift from .21 in 1968 to about .30 in 1980; for total undergraduates the shift will be from .27 to about .40 (See Chart 3).

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Chart 3 about here

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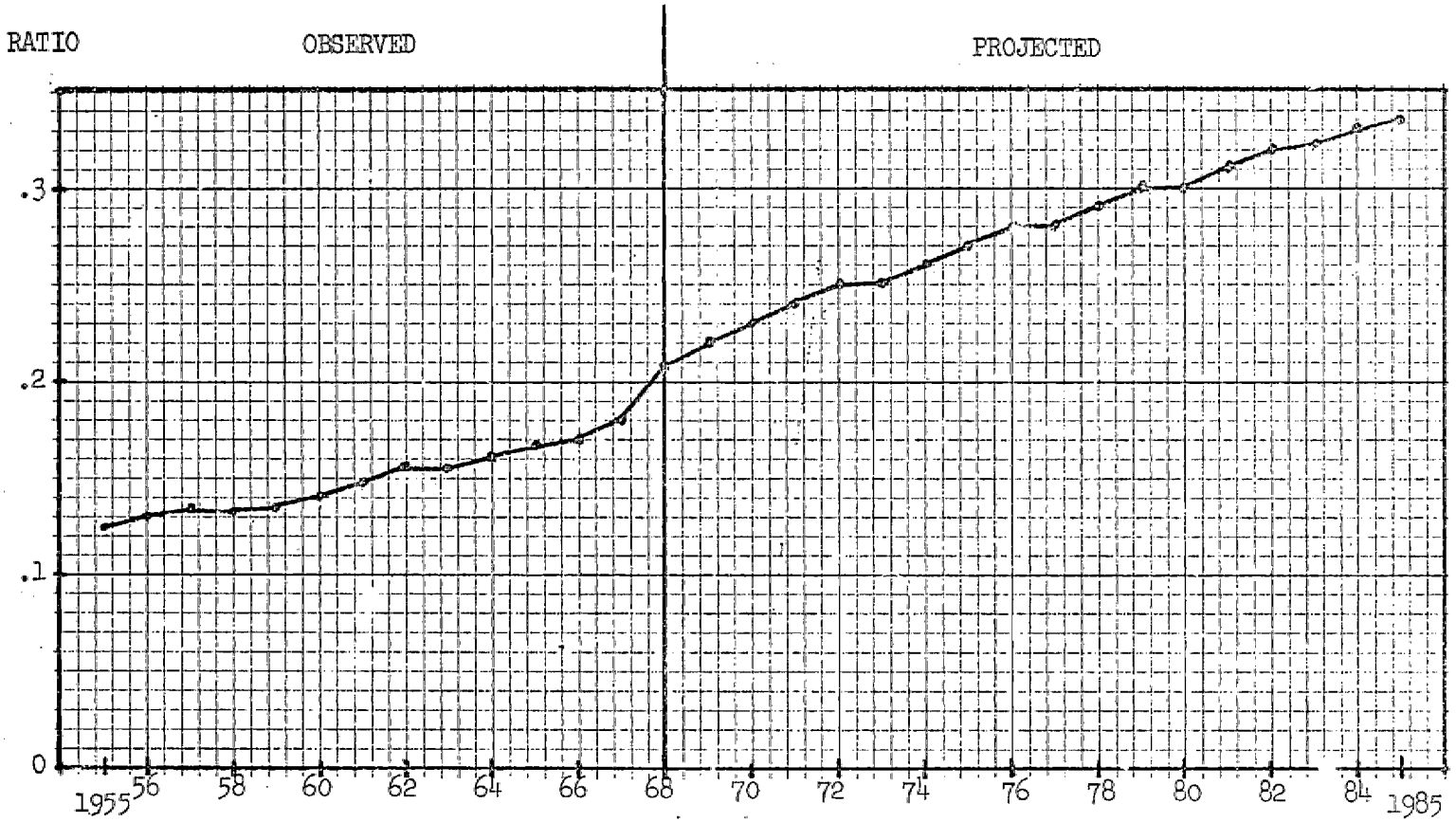
Types of Community College Enrollments:

Among the difficulties in estimating future growth in community colleges are differences in state and institutional

CHART 3

OBSERVED AND PROJECTED RATIOS OF JUNIOR COLLEGE DEGREE-CREDIT ENROLLMENTS TO TOTAL UNDERGRADUATE DEGREE-CREDIT ENROLLMENTS



SOURCE: Adapted from working papers of Gus Haggstrom for Carnegie Commission on the Future of Higher Education.

practices in serving part-time and full-time students, as well as practices in reporting enrollments in programs creditable toward the A.B. degree and those in occupational programs. In recent years, community colleges have enrolled more part-time students than those carrying full programs. This was particularly true in the early 'sixties, although by 1966 full-time enrollments exceeded those for part-time programs. In 1968, 45 percent of total two-year college enrollments were part-time. It is estimated that in the coming decade the proportions of part- to full-time students will fluctuate between that of 1968 and near parity. There are related problems in determining future ratios of occupational enrollments to A.B. degree-credit enrollments. Although there was an increase in reported occupational enrollments from 1965 to 1968--from 395,000 to 585,000--the wide-spread rejection of "terminal" programs as dead-end education and changes in terminology may reverse this trend. If, on the other hand, new emphasis is placed on preparing students for immediate employment and occupational renewal, the ratio of occupational enrollments to A.B. degree-credit enrollments will exceed the 1968 ratio of .37.

Necessary Conditions for Growth:

If community colleges are to develop adequately in the coming decade, there must be new policies and

resources at local, state, and national levels. In addition to careful planning at all levels, it seems clear that nationwide development of community colleges will be contingent upon federal assistance in the form of financial aid to students with matching institutional grants; start-up grants for states in which community college education is underdeveloped and for additional facilities in impacted urban and selected rural areas of high growth states; and grants-in-aid for support of special occupational and remedial programs, guidance services, and for preparation of professional staffs.

RECOMMENDED POLICIES FOR COMMUNITY COLLEGE DEVELOPMENT 1970-1980

The functions of the community college are educationally sound and in the service of important national goals. However, inadequate financial resources, lack of state and local planning, and shortages of qualified faculty and administrators constitute barriers to the full development of this essential component of higher education. The following policies are necessary for future development of the community college if it is to contribute to the equality and quality of higher education in America.

Policies Related to Functions and Goals

Improved Access to Higher Education:

Community colleges, in partnership with other institutions, should seek to improve access to higher education by serving

students who are generally representative of the communities in which they live. This means that they will increasingly provide opportunities for youths and adults not served by other colleges or universities. Several conditions are essential if these goals are to be achieved:

1. Community college education should be made available nation-wide.

2. The cost for attending community colleges should be low, and whenever possible, tuition free.

3. All students should be within commuting distance of a community college, except in rural areas where residential facilities are provided.

4. The educational program should be sufficiently comprehensive to attract and serve students with a wide range of abilities, interests, and career goals.

Technical-Vocational Education:

A broad curriculum of occupation preparation should include both associate degree programs and short-term programs for pre-employment and for occupational renewal. Scheduling of these programs should be sensitive to the needs of full- and part-time students and should give attention to the following:

1. Continued improvement in the quality and status of technical-vocational education is called for in order that community colleges will attract and serve students who have little interest in, or need for traditional academic work. Such preparation should provide proper foundation for occupational renewal.

2. By means of community studies and use of advisory committees, special attention should be given during the coming decade to new approaches to career education. Among the most promising innovations are:

   a. Cooperative education with industry, including educational leaves by employers and on-the-job training.

b. Programs which prepare for families of occupations and for career renewal.

c. Innovation in such emerging career fields as allied health and service occupations.

d. Realization of the career ladder by coordination of programs across high school, community college, and beyond. Occupational education should not be terminal or dead-end education.

3. The community colleges should not distort their role and limit opportunities for students by competing with advanced technical curricula in four-year colleges.

Transition from Two- to Four-Year Colleges:

Recent studies show continuing improvement in the ease with which students transfer from community colleges to four-year institutions. Nevertheless, new approaches to articulation among these institutions are needed in view of the steady increase in the proportions of undergraduates who begin their studies in local community colleges. The following recommendations would enhance the partnership within state systems of higher education:

1. Whenever quotas are set for undergraduate admission to public senior institutions, transfer rights of community college graduates and other qualified students from the two-year colleges should be given top priority.

2. Since the quality of lower-division preparation has and can be determined from the success of transfer students, articulation agreements between two- and four-year institutions should be based on validation of a student's preparation by the community college rather than on precise parallelism of courses in the two types of institutions.

3. Wider acceptance of high quality technical preparation as a basis of transfer from community colleges to four-year institutions is called for if many able students are to have opportunities for full development. There are dangers, however, that students will be denied transfer opportunities by over-selective programs.

Guidance as a Central Function:

Guidance is particularly crucial for many students who attend community colleges. Few of these students have yet made substantial educational and career decisions; they are unusually vulnerable to interrelated financial, academic, and personal pressures; and they have had less effective counseling in high school than their senior college peers. Continued efforts should be made to improve the quality of guidance in the community colleges with particular attention to the following recommendations:

1. Guidance should be everybody's business in the community college. This recongition enhances the role of the professionally trained counselor rather than diminishing it. In addition to direct counseling with students, counselors should be prepared and have the resources and organization to work with faculty members and others who advise students and assist them in explorations of educational and career options.

2. Coordinated programs of guidance between community colleges and the high schools are needed if students are to maximize the opportunities available to them in the local college and beyond.

3. Effective community college guidance can take place only when there is a flexible and comprehensive educational program which permits students to explore options and change directions without loss of face or excessive time.

Changing Approaches to Remedial Education:

A majority of students now in community colleges have deficiencies in skills necessary for college work which require new and systematic programs in remediation. The extent and seriousness of these deficiencies and related learning problems will increase as existing barriers to access to higher education are lowered. A number of changes in program concept and practices are called for:

1. Traditional programs of remediation which depress students and teachers alike should be replaced with developmental programs which invite success and which utilize individual and cultural differences.

2. Learning technologies should be used increasingly and more effectively so that students may pace themselves and assume primary responsibility for their own development.

3. New concepts and practices in student evaluation are essential if failure in school is to be changed to success in college. Competitive grading, at least in the early stages of remedial programs, should be replaced by evaluations of individual development. The concept of failure in this type of learning seems inappropriate.

4. Since it is likely that no single institution can bring the resources and expertness to the remediation of educationally disadvantaged students, community colleges should explore cooperative arrangements with other educational institutions and agencies in building developmental programs.

Community Service the Sine Qua Non of the Community College:

The most contemporary function of the community college is that of community service. Since such services are essential to the college's unique role in higher education, new resources,

staff commitments, and programs are called for in several areas of service:

1. The college as a cultural center should be a vital force, along with other institutions, in community renewal and in improving the quality of life in American society. College sponsored activities should reflect the broad interests, talents, and vitality of all segments of the community--particularly of its various ethnic and age groups. In addition, use of college facilities by community groups should be encouraged and facilitated by cooperative planning and funding.

2. Outreach to neglected neighborhoods and groups by "storefront" centers, mobile units, and support of other service agencies are all worth exploring in the effort to bring neglected citizens into the mainstream of American life.

3. Individuals and groups seeking assistance in making decisions about their education should be encouraged to use community college services either on campuses or through outreach programs. Such services might include consultations with industries in planning cooperative programs; with ethnic groups in stimulating and planning for cultural programs; and with high school students well before matriculation.

Policies Related to Community College Planning and Support

There is near universal agreement that long-term planning is essential for proper development of the community college. Such planning should take place at the college, district, state, and federal levels. Furthermore, there should be appropriate agencies for the coordination of these several levels of planning. The following policy guidelines are essential in planning for community college development during the next decade.

Federal Program of Incentive and Support:

The several federal agencies having responsibility for education, manpower, equal opportunity, and urban renewal might well seek guidelines for defining the role of community colleges in achieving national goals and for providing coordinate support for institutional development in a period of unparalleled growth. Such guidelines might be developed by a Presidential Commission or by a White House Conference on the Community College. The implementation of such federal guidelines might best be accomplished by a coordinator of community college affairs or by the establishment of a bureau of community college education within the Office of Education or elsewhere in the Executive Branch. Either agency should seek--through cooperation with legislators, federal officers, and national and state leaders in community college education--to facilitate the achievement of those aspects of community college development which are appropriate concerns of the federal government. Without some positive incentives from Washington, it is unlikely that 20 to 25 states will be able to overcome the combined problems of inadequate planning, insufficient financial resources, non-comprehensive programs, and competition from other institutions which plague community college development. The enrollment projections used in this paper assume that there will be such a federal program.

The following are among the most important contributions which can be made at the federal level:

1. Those states which have not done so should have incentives to establish master plans for community college development as a part of higher education, and for assuming responsibilities for educating a larger proportion of their college-age youth. Less than half of the states have adequate master plans at the present time.

2. By 1980, the equivalent of 250 to 280 new campuses will be needed. The Carnegie Commission, in Equality and Quality, has already recommended financial support for establishing community colleges not to exceed $10 million per institution, but averaging more nearly $1 million per institution. Since the needed institutions will be located in states with low community college development as well as in states with highly developed systems of public two-year colleges, the relative size of start-up grants should be determined by guidelines which encourage nation-wide availability of community colleges. Such guidelines should consider both the need for new colleges per se and for special facilities within existing institutions. In addition to start-up grants, one-half of the cost of all institutional construction, renovation, and replacement of community college facilities should be financed by federal grants.

3. Financial assistance to community college students and cost of education supplements to the matriculating colleges are essential if the two-year colleges are to serve the "new students" to higher education. However, since such federal assistance is to supplement rather than replace existing financial resources for community colleges, the cost of expanding educational opportunities should not be passed on to students by proportional increases in tuition. Rather, state equalization agreements should be negotiated in order to support enrollment growth where it is needed most. Furthermore, it is important that foregone earnings to family, as well as actual cost of attending college, be considered in determining a student's need for financial assistance.

In general, the actual cost of educating increased proportions of total undergraduates, regardless of a state's

level of community college development, should be financed by means of federal assistance. It has been noted already that such proportions for the total United States are likely to shift from .27 in 1968 to more than .35 in 1980.

4. Community colleges, in seeking to educate greater proportions of the lower half of high school achievers, must offer relatively costly vocational, remedial, and guidance programs. Federal assistance might best be given both through direct project grants to individual colleges and through state plans for development of such high risk programs.

5. Approximately 90,000 new teachers, (counting replacements), will be needed in community colleges by 1980, and at least 25 percent of these new teachers should be from racial and ethnic minority groups. This estimation of needed faculty is based on projections of equivalent full-time students. Estimated faculty needs for 1975 and 1980 and shown in Table 5 in which alternative student-faculty ratios of 20:1 and 25:1 are used. These faculty needs, in addition to needs for several thousand administrators and trained counselors, will require special federally-funded programs for professional pre-service and re-training.

   a. Cooperative programs among community colleges and graduate institutions for the preparation and re-education of community college teachers should be encouraged through federal project grants. Internships and substantial knowledge of community college affairs should be encouraged since academic qualifications in a discipline are not enough for success in community college teaching. Special assistance should be given to graduate schools which seek to develop new degrees for college teaching, such as the doctorate in arts.

   b. Special preparation will be needed for at least 10,000 professional counselors by 1980. Existing graduate schools are not prepared to assume this responsibility--either in reference to numbers or to quality of preparation. Graduate centers should be established under federal grants to define the task and to spearhead the training and re-training of community college counselors. Three to four thousand of these new counselors should be from minority groups.

c. Although several universities and foundations have for a decade anticipated the need for administrative leadership, a much greater push is called for in the 'seventies. By 1980, approximately 900 community college presidents and an equal number of academic deans will be needed. In addition, at least this number of deans of student personnel and a similar number of chief business officers will be needed. To these numbers should be added several thousand assistant deans, and department or division chairmen. Grants for graduate study and for program development at graduate schools are needed if these leadership needs are to be met.

These estimates of needed college leadership are tentative since they are based on projections of new institutions and upon opinions about the turnover of leadership in a period of great stress and organizational changes in higher education.

State Master Plans for Community Colleges:

Since nearly one-half the states do not have any master plans for community college development, it is the Commission's judgment that each state should have such plans. They should be congruent with the state's system of higher education, demographic characteristics, and financial resources. The following are considered to be among the most important elements of such state planning:

1. State plans should reaffirm the importance of local boards or committees in order to insure maximum response to and from the college community. Such local responsibility is not incongruent with the efficient use of state resources and appropriate cooperation among colleges.

2. Coordination of community college development at the state level should be vested in an independent board rather than in one responsible to the state university or state board of education. In states with super boards for all of higher education, the community

colleges should be equally represented in relationship to other components of higher education. Such state-wide coordination should include differentiation of programs among the several segments of higher education, admission and transfer policies, distribution of state resources, and establishment of new campuses. The state agency for coordination should not only oversee state plans, but should bring about periodic renewal.

3. Financial support for community college development and operation should come from all three levels of government. State equalization policies, as well as differences in local initiative should determine the proportions of such support. Support from local taxation should generally not exceed 30 percent of either current or capital costs. For some states this recommendation will require a substantial shift from local to state financing. The recommendations which have been made for federal assistance in community college development should ease the financial burden in the states.

4. Single and multi-campus community college districts should prepare and submit for state review, long-term educational plans which insure maximum access, comprehensive programs, and service to the community. Such plans should include arrangements for utilizing all available resources for developing facilities, programs, and professional staffs. Special attention should be given to inter- and intra-district cooperation in achieving community college goals.

Policies Related to Governance of Community Colleges

There is reason to believe that community colleges can develop best within state systems which provide maximum responsibilities at the local level with support, coordination, and leadership at the state level. Trends toward increased state and federal support for community colleges have profound implications for governance of these institutions. To date, the fullest development of community colleges has been in those

states with the greatest degree of local initiative and financial commitment, although several of the pacesetter states have moved toward greater control and financial support. Since the trend toward centralization seems nation-wide, new governance patterns are needed to insure proper local initiative and community centeredness.

The following policies are recommended:

1. Local boards should recognize that responsibilities, except for broad policy matters, should be vested in the faculty and administration. New governance structures which facilitate such collegial responsibility should be encouraged. As part of these new structures, there should be opportunities for students to participate in educational decisions, as well as in student affairs.

2. Although executive and legislative branches of state governments have essential responsibilities and authority in determining educational goals of public support for their achievements, the exercise of such authority should not encumber the delegated authority of professional and lay persons at the state and local levels.

PROJECTIONS OF COMMUNITY COLLEGE GROWTH 1970-1980

There are such wide state variations in the provision for community colleges that differential projections of growth on a state-by-state basis are needed in order to determine policies for their proper development nation-wide. This section of the paper will present reasonable projections of community college growth by state in enrollments, in needed campuses, and for faculty.

Projected Enrollments by States

The Carnegie Commission staff has developed several projections of enrollments in two-year institutions of higher education to 1980, based on alternative assumptions. The three sets of projections of total enrollments, including full-time and part-time students, are based upon projections which are derived from past trends in each state's undergraduate enrollment rates relative to the number of high school graduates in that state during the preceding four years. The three projections--A, B, and C--of two-year college enrollments for each state include enrollments for two-year branches of universities and are based on the following assumptions about the future relationship between two-year college enrollment and total undergraduate enrollment (Carnegie Commission, June, 1970, p. 42):

> For Projection A, the assumption is that the proportion of undergraduates in the two-year colleges will remain the same as that in 1968 (29 percent).
>
> For Projection B, it is assumed that 60 percent of the future growth in undergraduate enrollment will be absorbed in two-year colleges. (This 60 percent figure has been exceeded in four states during the past five-year period.)

For Projection C, it is assumed that the future annual increase in percentage of undergraduate enrollment in the two-year colleges in each state will be the same as that for each state data for the past five-year period. According to Projection C, the proportion of undergraduates enrolled in the two-year colleges, including two-year branches of universities, will rise from 29 percent in the U.S. in 1968 to about 35 percent in 1980.

The three projections of total two-year college enrollment shown in Table 5 range from about 3,100,000 to 4,400,000 in 1980. The assumptions underlying Projection B are probably realistic for states with 30 percent or more of undergraduates enrolled in two-year colleges in 1968 and for most of those with 20 to 30 percent in two-year colleges (see Map 1, p. 38). Projection C is more realistic for the remaining states. If there are decisive state and national efforts to stimulate community college development, enrollments will increase more rapidly than those suggested by Projection C. Nevertheless, this more conservative of the two projections shown in Table 5 seems most realistic and is used as the basis for projecting staff needs.

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Table 5 about here

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Projected New Colleges by States

There are a number of important assumptions in the state projections of needed new campuses. First, projections do not indicate what will occur, but what could occur provided there

TABLE 5

TWO-YEAR COLLEGE ENROLLMENT, ACTUAL, 1968, AND THREE ALTERNATIVE PROJECTIONS TO 1980 BY STATE
(numbers in thousands)

State	Actual 1968[a]	Projected, 1980			Percentage change, 1968-198		
		A	B	C	A	B	C
United States	1,871.0	3,102.3	4,428.1	3,738.1	65.8	136.7	99.
Alabama	19.9	38.4	68.7	62.2	93.0	245.2	212.
Alaska	0.7	1.6	6.6	1.3	128.6	842.9	85.
Arizona	32.1	66.5	82.0	81.9	107.2	155.5	155.
Arkansas	3.8	6.5	24.6	8.0	71.1	547.4	110.
California	600.8	989.0	981.2	1,022.4	64.6	63.3	70.
Colorado	13.2	23.6	55.0	32.1	78.8	316.7	143.
Connecticut	20.4	37.4	63.0	53.5	83.3	208.8	162.
Delaware	4.5	8.5	13.2	10.3	88.9	193.3	128.
District of Columbia	3.9	4.1	5.7	4.3	5.1	46.2	10.
Florida	95.4	201.1	217.3	225.0	110.8	127.8	135.8
Georgia	19.6	37.3	71.0	44.8	90.3	262.2	128.6
Hawaii	6.3	11.3	16.6	13.3	79.4	163.5	111.1
Idaho	6.6	10.8	16.5	8.9	63.6	150.0	34.8
Illinois	113.7	183.9	234.1	219.7	61.7	105.9	93.2
Indiana	7.4[b]	11.3	53.2	15.1	52.7	618.9	104.1
Iowa	18.9	27.2	42.9	36.0	43.9	127.0	90.5
Kansas	14.1	20.4	36.2	24.0	44.7	156.7	70.2
Kentucky	11.9	20.2	46.5	25.9	69.7	290.8	117.6
Louisiana	6.6	11.5	51.4	22.0	74.2	678.8	233.3
Maine	0.4	0.6	8.0	0.7	50.0	1,900.0	75.0
Maryland	27.1	50.6	82.3	68.2	86.7	203.7	151.7
Massachusetts	40.2	62.2	111.7	75.1	54.7	177.9	86.8
Michigan	99.7	157.5	201.1	196.3	58.0	101.7	96.9
Minnesota	16.3	25.0	59.4	36.1	53.4	264.4	121.5
Mississippi	22.0	38.4	50.4	41.6	74.5	129.1	89.1
Missouri	28.6	45.5	78.7	50.0	59.1	175.2	74.8
Montana	1.2	1.9	10.0	3.1	58.3	733.3	158.3
Nebraska	3.6	5.4	19.6	6.8	50.0	444.4	88.9

(Table continued on next page)

Table 5

(continued)

State	Actual 1968	Projected, 1980			Percentage change, 1968-1980		
		A	B	C	A	B	C
Nevada	0.0	0.0	6.3	0.0	0.0	---c	0.0
New Hampshire	1.?	2.1	11.6	2.7	75.0	866.7	125.0
New Jersey	24.2	42.7	88.7	78.3	76.4	266.5	223.6
New Mexico	3.0	6.0	23.1	9.0	100.0	670.0	200.0
New York	168.0	270.7	370.2	337.4	61.1	120.4	100.8
North Carolina	37.4	65.4	97.0	91.4	74.9	159.4	144.4
North Dakota	5.0	7.5	12.4	7.9	50.0	148.0	58.0
Ohio	43.3	67.4	142.3	96.4	55.7	228.6	122.6
Oklahoma	10.9	16.1	37.6	16.8	47.7	245.0	54.1
Oregon	25.1	37.9	50.3	53.6	50.1	100.4	113.5
Pennsylvania	56.1	84.5	151.8	120.3	50.6	170.6	114.4
Rhode Island	5.7	9.1	18.0	14.9	59.6	215.8	161.4
South Carolina	13.1	21.9	34.2	30.6	67.2	161.1	133.6
South Dakota	0.3	0.5	8.7	0.6	66.7	2,800.0	100.0
Tennessee	9.0	14.9	51.6	24.2	65.6	473.3	168.9
Texas	97.0	167.4	244.3	222.1	72.6	151.9	129.0
Utah	4.9	8.3	30.8	10.5	69.4	528.6	114.3
Vermont	1.9	2.7	6.5	2.6	42.1	242.1	36.8
Virginia	22.7	42.4	80.8	70.3	86.8	255.9	209.7
Washington	66.8	101.6	109.7	123.3	52.1	64.2	84.6
West Virginia	4.2	6.0	17.9	6.1	42.9	326.2	45.2
Wisconsin	27.1	45.0	87.6	53.2	66.1	223.2	96.3
Wyoming	4.8	7.9	9.6	8.4	64.6	100.0	75.0

[a] 1968 enrollments, which include both degree-credit and non-degree-credit enrollments, are based on U.S. Office of Education data; enrollments on two-year campuses of public four-year institutions are not included in OE data, but have been added. There were 78,700 students enrolled on these two-year campuses in 1968.

[b] Does not include four predominantly two-year branch campuses of Purdue University.

[c] Computation of a percentage increase is not meaningful when the base is zero.

Source: Projections prepared by the staff of the Carnegie Commission on Higher Education under the direction of Gus W. Haggstrom.

were adequate planning, adequate financing, a commitment to comprehensive colleges, and not too much competition from other types of institutions. As has been stated earlier, these assumptions cannot be met in half of the states unless there is some outside push from the federal government. Secondly, the projections represent a desirable pattern of growth and institutional size in order to provide adequate community college programs. Thus, it is important that all public community colleges reach a size of about 1,500. About half the institutions now have less than 1,000 students, although the national average of about 2,500 students per public institution. In sparsely populated states, dormitories will be needed in existing institutions rather than more small community colleges, and efforts to consolidate some small rural colleges might be feasible.

If there is to be a community college within commuting distance of every potential student, except in sparsely populated areas, new colleges will have to be established in all but three states and at a national rate during the 1970's paralleling that of the previous decade. This would mean that new campuses would open at the rate of about one each week unless the two-year branch campuses of public universities in several states develop truly comprehensive curricula. In the unlikely event that these extension centers develop programs to serve the broad educational needs of youth and adults at low cost, only 230 to 280 new colleges will be needed. This is the

number of new community colleges which the Carnegie Commission has called for in its special report on recommendations for the open-door colleges. The Commission based its recommendations on enrollments from Projections B and C as shown in Table 5; its study to identify sizeable communities in which there is no public two-year college; and projections of average enrollments in public two-year institutions by state. Although the Commission believes the maximum optimum size of community colleges to be 5000 day enrollments, several states already exceed that average size and some have policies calling for even larger institutions. On the other hand, some colleges in sparsely populated areas may not be able to reach the minimum size of 2000 day students as advocated by the Commission. These state differences are reflected in the Commission's estimates of needed new community colleges by 1980 as shown in Map 1.

Map 1 about here

Planning for the development of entirely new colleges is only part of the challenge ahead. Existing institutions will grow in size in order to accommodate, along with new colleges, the anticipated enrollments. In brief, facilities will be needed for at least an additional million full-time equivalent students in the 1970's.

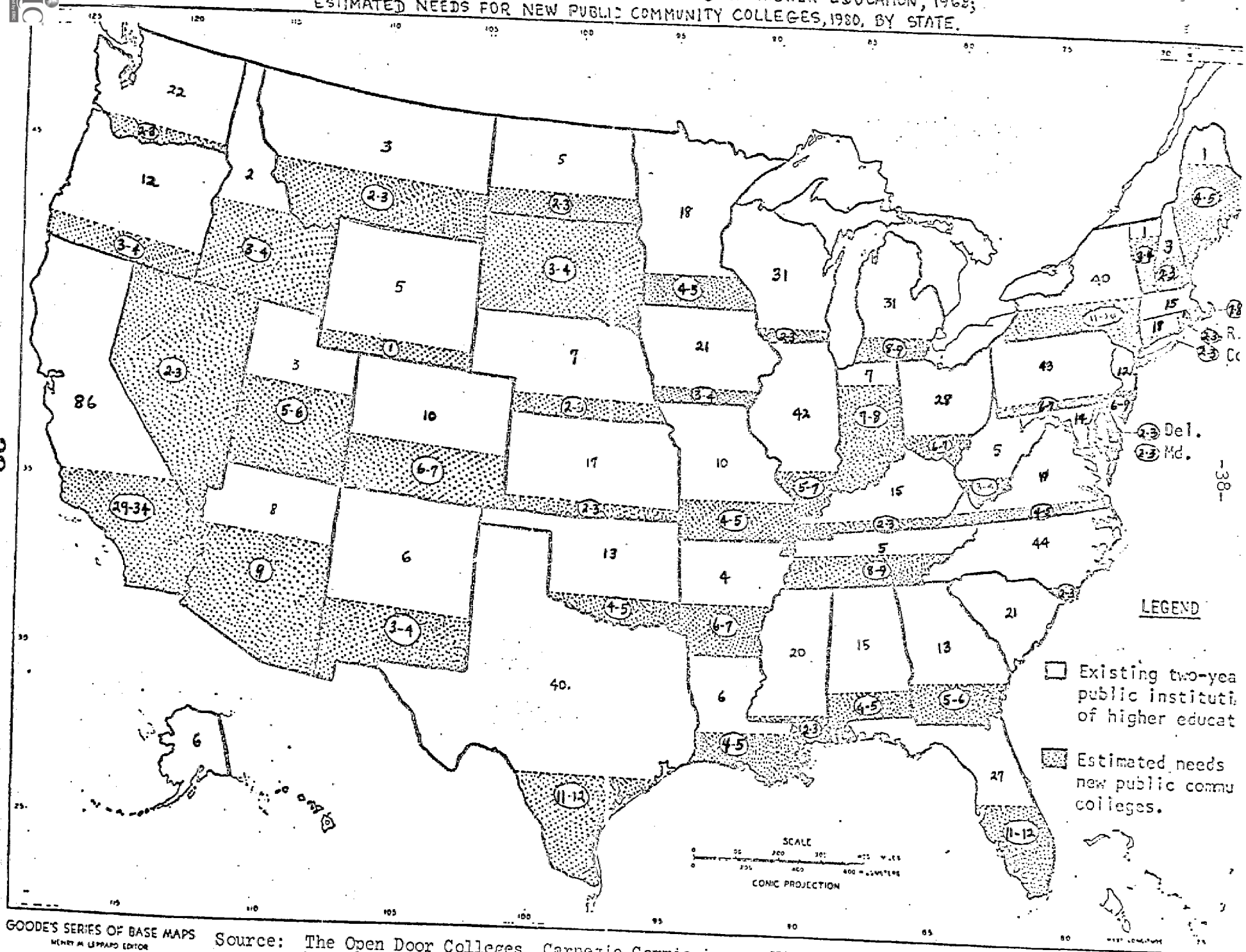
Estimations of New Faculty Needs

Assumptions and Nation-wide Estimations:

Various assumptions may be used in projecting needed new faculty for community colleges. The use of equivalent full-time enrollments divided by expected ratios of students to teachers

MAP 1

NUMBER OF EXISTING PUBLIC TWO-YEAR INSTITUTIONS OF HIGHER EDUCATION, 1968;
ESTIMATED NEEDS FOR NEW PUBLIC COMMUNITY COLLEGES, 1980, BY STATE.



GOODE'S SERIES OF BASE MAPS
HENRY M. LEPPARD EDITOR

Source: The Open Door Colleges, Carnegie Commission on Higher Education, Berkeley, June, 1970.

seems most defensible. Nevertheless, consideration must also be given to the gross number of students to be served in view of heavy part-time enrollments in the community colleges. In addition, some estimation of teacher turn-over must be made. Table 5 shows the translation of these assumptions into the estimated number of teachers needed for community colleges in 1975 and 1980, and the number of new teachers at those same times.

By 1975 a total of from 85,000 to 107,000 teachers will be needed for the nation's community colleges, and between 103,000 and 128,000 by 1980. The number of new teachers, including replacements, should range from 41,000 to 50,000 by 1975, and from 71,000 to 89,000 by the end of the decade.

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Table 6 about here

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CONCLUSION

The Nation takes seriously the achievements and claims of the two-year colleges. As political and educational leaders seek to solve many of the problems of quality and equality in our society, the community college gets star billing. Although many are concerned about the gap between the role expectations for this newest segment of higher education and the resources currently available at local, state, and federal levels, no other institution is so potentially able to do the job. In

TABLE 6

ESTIMATED TOTAL FACULTY AND NEW FACULTY FOR COMMUNITY COLLEGES FROM 1970 TO 1975 AND TO 1980[a]

	1975 STUDENT/FACULTY RATIO		1980 STUDENT/FACULTY RATIO	
	20:1	25:1	20:1	25:1
TOTAL FULL-TIME EQUIVALENT FACULTY	107,000	85,000	128,000	103,000
ESTIMATED TOTAL FACULTY [b]	118,000	94,000	140,000	113,000
NEW FTE FACULTY	32,000	26,000	54,000	43,000
TOTAL NEW FACULTY	35,000	29,000	59,000	47,000
REPLACEMENT FACULTY [c]	15,000	12,000	30,000	24,000
TOTAL ADDITIONAL FACULTY NEEDED	50,000	41,000	89,000	71,000

Source: Medsker, L. L. and Tillery, D. Breaking the Access Barriers. New York: McGraw-Hill, 1971.

[a] These estimations are based on Projection C of equivalent full-time enrollments as discussed on page 33.

[b] Since FTE faculty do account for most faculty needed for part-time programs, only 10% of FTE faculty of 1970 has been added and rounded to thousands.

[c] An average teacher longevity of 25 years is assumed in estimating replacements.

reviewing the current status and future of the two-year college in America, Medsker and Tilery conclude that:

> Its supreme test is yet to come, perhaps during the decade of the 70's. Almost certainly the period immediately ahead will bring profound social changes and there will be a need which exceeds even that of prior years for an institution like the community college. For it to respond to these changes will require the greatest possible input on the part of those individuals within its institutions as well as those who occupy leadership positions in government and other segments of education (Medsker and Tillery, 1971).